



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,614	10/30/2000	William Silver	C00-057	7066

23459 7590 07/14/2004

ARTHUR J. O'DEA
LEGAL DEPARTMENT
COGNEX CORPORATION
ONE VISION DRIVE
NATICK, MA 01760-2077

EXAMINER

LE, BRIAN Q

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/699,614

Applicant(s)

SILVER, WILLIAM

Examiner

Brian Q Le

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,7 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,7 and 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/30/2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 22, 2004 has been entered.

Drawings

2. This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purpose. When the application is allowed, applicant will be required to submit new formal drawings on separate sheet, starting from page 1.

Response to Amendment and Arguments

3. Applicant's amendment filed April 22, 2004, has been entered and made of record.

4. Applicant's arguments with regard to claims 6-7 and 11-18 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 11, the Applicant argues that Michael reference, U.S. Patent No. 6,137,893 does not teach the rendering targets on an object characterized by a fan shape with at least one of a plurality of blades having a contour boundary representing a non-zero spiral or non-zero skew because the targets rendered with non-zero spiral/non-zero skew boundary contours, as claimed by Applicant would eliminate straight radial features that result in grid degeneracy and size self-similarity when searching for the target so as

Art Unit: 2623

to provide a pose of the object. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., targets rendered with non-zero spiral/non-zero skew boundary contours, as claimed by Applicant would eliminate straight radial features that result in grid degeneracy and size self-similarity when searching for the target so as to provide a pose of the object) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In addition, the Examiner makes a broad interpretation to the claim due to broadly claimed language. To further assist the Applicant with the guidance with claim language interpretations so that the Applicant can add further/more details limitations from the specification to the claims to overcome the prior arts, the Examiner is presenting MPEP, section 2111, Claim Interpretation; Broadest Reasonable Interpretation as follow: "The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim," to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words

Art Unit: 2623

in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification.””.

Therefore, due to broadly claimed language which resulted a broad interpretation, Michael does teaches a method of locating an object (Abstract, last 4 lines) comprising:

Rendering a target on the object (image generation) (FIG 4, element 106), the target characterized by a fan shape (FIG. 1B-1D);

The target having a plurality of blades (FIG. 1B-1D);

At least one of the plurality of blades having a boundary contour (boundary lines covering the blade) (FIG. 1B, elements 34 and 46) representing a non-zero skew (FIG. 1B-1D); and searching for the target so as to provide a pose of the object (column 9, lines 64-67 and column 10, lines 1-15).

Searching for the target so as to provide a pose (location/position/orientation) of the object (Abstract, last 2 lines).

Regarding claims 6-7, the Applicant argues that nothing in McCarthy reference U.S. Patent 5,125,035 suggests the features in an image characterizing a hole can be advantageous when included in an alignment target. The Examiner respectfully disagrees. McCarthy clearly indicates the advantage of using the holes in locating the centroid of the object's image to further obtain the appropriate position and coordinate of the object and thus improving the alignment process (column 2, lines 7-44 and column 3, lines 20-35).

Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Michael U.S. Patent No. 6,137,893.

Regarding claim 11, Michael teaches a method of locating an object (Abstract, last 4 lines) comprising:

Rendering a target on the object (image generation) (FIG 4, element 106), the target characterized by a fan shape (FIG. 1B-1D);

The target having a plurality of blades (FIG. 1B-1D);

At least one of the plurality of blades having a boundary contour (boundary lines covering the blade) (FIG. 1B, elements 34 and 46) representing a non-zero skew (FIG. 1B-1D); and searching for the target so as to provide a pose of the object (column 9, lines 64-67 and column 10, lines 1-15).

Searching for the target so as to provide a pose (location/position/orientation) of the object (Abstract, last 2 lines).

Regarding claim 12, Michael teaches the method further comprising the skew of the at least one of the plurality of blades is different from a skew of at least one other blade in the plurality of blades (FIG. 1C).

Regarding claim 13, Michael teaches the method further comprising the skew of the at least one of the plurality of blades being different from a skew of all the other blades in the plurality of blades (FIG. 1C).

Regarding claim 14, Michael teaches the method wherein each of the plurality of blades having a skew different from the skew of all other blades in the plurality of blades (FIG. 1C).

Regarding claim 15, please refer to claim 11 for the explanation. In addition, Michael teaches a method wherein at least one of the plurality of blades having a non-zero spiral (FIG. 1C) (column 9, lines 64-67 and column 10, lines 1-15).

For claim 16, Michael also discloses the method comprising the spiral (pattern) of the at least one of the plurality of blades being different from a spiral of at least one other blade in the plurality of blades (FIG. 1C).

Regarding claim 17, Michael teaches the method further comprising the spiral of the at least one blade in the plurality of blades being different from the spiral of all other blades in the plurality of blades (FIG. 1C).

For claim 18, Michael further teaches the method wherein each of the plurality of blades having a spiral different from the spiral of all other blades in the plurality of blades (FIG. 1C).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6-7, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michael U.S. Patent No. 6,137,893 and further in view of McCarthy U.S. Patent No. 5,125,035.

Regarding to claim 6, please refer back to claim 1 for the explanation. Michael does not disclose a concept of a blade with a hole. McCarthy teaches a system to target object (abstract) comprises a blade target with hole (column 2, lines 8-41) (abstract; FIG. 5; Summary of the invention; column 3, lines 7-24). Modifying Michael's method of locating object according to McCarthy would be able to allow blade with hole so the image's centroid position can be determined and corrected (column 2, lines 35-42). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Michael according to McCarthy.

Regarding claim 7, McCarthy further discloses the method wherein each of the plurality of blades includes at least one hole (turbine engine blades all have holes to cool all the blades off) (column 2, lines 7-11).

Regarding claim 19, McCarthy teaches the method further comprising at least one of the plurality of blades including a hole (turbine engine blades have holes) (column 2, lines 7-11)

For claim 20, please refer back to claim 19 for the teaching.

Art Unit: 2623

Contact Information

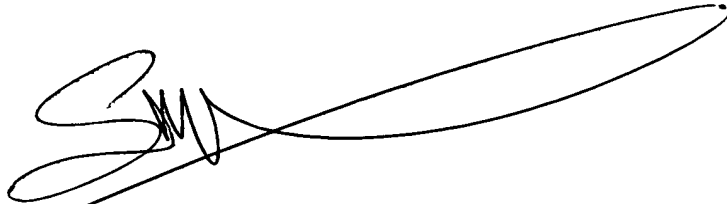
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083.

The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL
June 30, 2004

A handwritten signature in black ink, appearing to read 'SAMIR AHMED', is written over a long, sweeping horizontal line that extends from the left margin towards the right.

**SAMIR AHMED
PRIMARY EXAMINER**